



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,508	04/21/2005	Sei Aoki	Q85110	6977
23373 7590 01/12/2009 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER				
RONESL VICKERY M				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
01/12/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/516,508

Applicant(s)

AOKI ET AL.

Examiner

VICKEY RONESI

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. All outstanding claim objections and 35 USC 112, 2nd paragraph rejections have been withdrawn in light of applicant's amendment filed on 9/30/2008.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
3. The new grounds of rejection set forth below are necessitated by applicant's amendment filed on 9/30/2008. In particular, claim 1 has been amended to recite an amount of carbon fibers of 25-50 parts by mass per 100 parts by mass of rubber. Thus, the following action is properly made final.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to claim 1, the endpoint of 25 with respect to the amount of carbon fibers fails to satisfy the written description requirement of 35 USC 112, first paragraph since there does not appear to be a written description requirement of the amount in the application as

originally filed, *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) and MPEP 2163. While there is support for 25 parts by mass of Carbon fiber A, Carbon fiber B, and Carbon fiber C in Table 1 on page 21 of the specification, there is no support for any carbon fiber like more broadly claimed being present in an amount of 25 parts by mass or for carbon fiber being used in an amount of 25 parts by mass of carbon fiber without also having 25 parts by mass of carbon black.

With respect to claims 2-14, they are rejected for being dependent on a rejected claim.

Claim Rejections - 35 USC § 103

5. Claims 1-10, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP '677 (EP 1 243 677) in view of Snyder et al (US 5,707,916).

The rejection is adequately set forth in paragraph 4 of Office action mailed on 3/31/2008 and is incorporated here by reference.

6. Claims 1-10, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagisawa et al (US 7,018,601) in view of Snyder et al (US 5,707,916).

The rejection is adequately set forth in paragraph 5 of Office action mailed on 3/31/2008 and is incorporated here by reference.

7. Claims 1-10, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo et al ("Structural Characterization of Cup-Stacked-Type Nanofibers with an Entirely

Hollow Core”, *Applied Physics Letters*, **80**:70, pp. 1267-1269) in view of Snyder et al (US 5,707,916).

The rejection is adequately set forth in paragraph 6 of Office action mailed on 3/31/2008 and is incorporated here by reference.

8. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over either EP ‘677 (EP 1 243 677), Yanagisawa et al (US 7,018,601), or Endo et al (“Structural Characterization of Cup-Stacked-Type Nanofibers with an Entirely Hollow Core”, *Applied Physics Letters*, **80**:70, pp. 1267-1269) in view of Snyder et al (US 5,707,916) and further in view of Verthe et al (US 5,718,781).

The rejection is adequately set forth in paragraph 7 of Office action mailed on 3/31/2008 and is incorporated here by reference.

Response to Arguments

9. Applicant's arguments filed 9/30/2008 have been fully considered but they are not persuasive. Specifically, applicant argues (A) that none of the cited prior art discloses or suggests 25-50 parts by mass of carbon fibers and (B) that none of the cited prior art discloses or suggests the effect of carbon fibers on thermal conductivity.

With respect to argument (A), Snyder et al discloses carbon nanofibers (col. 2, lines 17-34) which are useful in elastomers in combination with carbon black or silica for use in tires (col. 3, lines 1-5), wherein the amount of carbon fibers is less than 50 parts by volume to provide for improved mechanical reinforcement properties (col. 3, lines 18-25). It is the examiner's position

that the amount of carbon fibers in volume overlaps with the presently claimed parts by weight amount given that the carbon fibers (ρ = about 1.5 g/cc) have a higher density than polymers (ρ = about 1 g/cc) and would provide for parts by mass amounts of *less* than 50 parts by mass per 100 parts by mass of rubber and thereby teaches an amount that overlaps with the presently claimed range of 25-50 parts by mass. It is well settled that where the prior art describes the components of a claimed compound or compositions in concentrations within or overlapping the claimed concentrations a *prima facie* case of obviousness is established. See *In re Harris*, 409 F.3d 1339, 1343, 74 USPQ2d 1951, 1953 (Fed. Cir. 2005); *In re Peterson*, 315 F.3d 1325, 1329, 65 USPQ 2d 1379, 1382 (Fed. Cir. 1997); *In re Woodruff*, 919 F.2d 1575, 1578 16 USPQ2d 1934, 1936-37 (CCPA 1990); *In re Malagari*, 499 F.2d 1297, 1303, 182 USPQ 549, 553 (CCPA 1974)

With respect to argument (B), while Snyder teaches an amount of carbon nanofiber based on its reinforcing properties rather than its conductivity properties, it is noted that obviousness under 103 is not negated because the motivation to arrive at the claimed invention as disclosed by the prior art does not agree with applicant's motivation. *In re Dillon*, 16 USPQ2d 1897 (Fed. Cir. 1990), *In re Tomlinson*, 150 USPQ 623 (CCPA 1996). Furthermore, case law holds that it "does not alter the conclusion that its use in a prior art composition would have been *prima facie* obvious from the purpose disclosed in the reference." *In re Linter*, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

Art Unit: 1796

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

1/8/2009

Vickey Ronesi

/V. R./

Examiner, Art Unit 1796

/Vasu Jagannathan/

Supervisory Patent Examiner, Art Unit 1796